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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/078,975	02/19/2002	Petrus Henricus Cornelius Bentvelsen	NL010104	6523

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EXAMINER	
TRUONG, THANHNGA B	
ART UNIT	**PAPER NUMBER**
2135	

DATE MAILED: 09/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/078,975	BENTVELSEN, PETRUS HENRICUS CORNELIUS	
	Examiner	Art Unit	
	Thanhnga B. Truong	2135	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 February 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2/19;6/10/02*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1, 11, and 13 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 1 recites steps of embedding a secondary signal of a secondary channel in the bitstream of a primary signal of a primary channel, wherein the bitstream of the primary signal is distorted before outputting the bitstream of the primary signal such that the secondary signal is represented by a predetermined distortion. The steps do not perform the requested action. Claim 1 also recites a method step that needs no implementation on a computer. Thus, claim 1 does not recite any structure, i.e., machine to carry out the functions of all the recited steps. Therefore, claim 1 recite non-statutory subject matter. Claims 2-7 depend on claim 1, therefore they are rejected with the same rationale applied against claim 1 above.

Claims 11 and 13 have limitations that are similar to those of claim 1, thus they are rejected with the same rationale applied against claim 1 above. Claim 12 depends on claim 11, therefore they are rejected with the same rationale applied against claim 11 above.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-3, 8, 11, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hagen et al (US 6,182,030).

a. *Referring to claim 1:*

i. Hagen teaches:

(1) Method of embedding a secondary signal of a secondary channel in the bitstream of a primary signal of a primary channel, wherein the bitstream of the primary signal is distorted before outputting the bitstream of the primary signal such that the secondary signal is represented by a predetermined distortion **[i.e., Hagen discloses embedded coding, the encoder produces a composite bit stream made up out of two or more separate bit streams: a primary bit stream which contains a basic description of the signal, and one or more auxiliary bit streams which contain information to enhance the basic signal description (column 2, lines 6-11 and also referring to Figure 1 of Hagen)].**

ii. Although Hagen does not clearly mention the bitstream of the primary signal is distorted before outputting the bitstream of the primary signal, Hagen does imply that:

(1) The invention allows the correction of distortion resulting from the primary encoding/decoding process for primary coders, which attempt to model the signal waveform **(column 5, lines 33-35 of Hagen).**

iii. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to:

(1) clearly point out how the bitstream of the signals is being distorted since the ability to strip bits from an existing bit stream while maintaining the ability to reconstruct the speech signal (albeit at a lower accuracy) is an especially useful type of bit rate flexibility **(column 1, lines 25-29 of Hagen).**

iv. The ordinary skilled person would have been motivated to:

(1) clearly point out how the bitstream of the signals is being distorted because high quality coding of acoustical signals at low bit rates is of pivotal importance to communications systems such as mobile telephony, secure telephone, and voice storage **(column 1, lines 10-12 of Hagen).**

b. *Referring to claims 2 and 3:*

i. Hagen further teaches:

(1) wherein local phase errors are inserted in the bitstream of the primary signal; wherein the absolute value of the phase error is chosen such that it is smaller than the channel clock period of the primary channel, preferably smaller than half of the channel clock period, preferably between 20% and 50% of the channel clock period **[i.e., Hagen's invention also provides the encoding of the adaptive equalization operator, while allowing for some coding error, by means of a bit stream which may be separable from the bit stream of the primary coding algorithm (column 5, lines 8-12)]**.

c. *Referring to claims 8, 11, 13:*

i. These claims have limitations that are similar to those of claim 1, thus they are rejected with the same rationale applied against claim 1 above.

5. Claims 4-5, 9, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hagen et al (US 6,182,030), and further in view of Chao et al (US 5,204,882).

a. *Referring to claims 4 and 5:*

i. Hagen teaches:

(1) wherein low frequency variations are introduced into the channel clock of the primary channel; wherein the channel clock of the primary channel is modulated within the bandwidth of a phase locked loop circuit locked to the primary signal for synchronization, the channel clock preferably being modulated with a phase or frequency modulated sine wave **[i.e., Figure 5 illustrates one example of the estimator 33 of Figure 3. The target signal blocks and the primary coded signal blocks are pairwise Fourier transformed at 56 (other suitable frequency domain transforms may also be used) to produce the signals B(n) and BR(n), which are applied to a dividing apparatus 50 including a divider 51 and a simplifier 53. B(n) is divided by BR(n) at divider 51 to produce T(n), and the phase information is discarded by simplifier 53, so that only the magnitude information .vertline.T(n).vertline. is provided to the encoder 35 (column 8, lines 56-65)]**.

ii. Although Hagen teaches frequency domain transforms involving Fourier Transformer (e.g., the French mathematician Emile Fourier proved that a repeating, time-varying function may be expressed as the sum of a [possibly infinite] series of sine and cosine waves) (see Newtow Telecom Dictionary), Hagen is silent about the phase locked loop circuit locked to the primary signal for synchronization. On the other hand, Chao teaches:

(1) a variable bit rate transmitting unit of customer premises equipment, generates data at a rate which is not proportional to the service clock frequency. However, in addition to the data, timing cells are generated at a rate which is proportional to the service clock frequency of the variable bit rate source. Illustratively, the variable bit rate data is formatted into cells and both the data cells and timing cells are embedded in an Asynchronous Transfer Mode bit stream for transmission via a broadband trunk and exchange network to a receiving unit of customer premises equipment. At the receiving unit of customer premises equipment, the received data cells are disassembled and the data is stored in a receive-buffer. A phase-locked loop generates a local clock signal which controls the rate at which information is read out of the receive-buffer and transferred to the receiving unit of customer premises equipment. The output signal of the phase-locked loop is generated at a rate which is proportional to the average rate at which timing cells are received (not the average rate at which data is received) so as to recover the service clock **(column 3, lines 17-39 of Chao).** Furthermore, referring to Figure 9, a digital phase locked loop (DPLL) 90 is used to recover the transmit service clock Fx. The digital phase locked loop 90 receives the rwr signal from the cell disassembler via line 83 and generates the rrd signal on line 87 which reads data out of the buffer 82 on line 89 for transmission into the decoder 72. The role of the phase locked loop 90 is to cause Fr, the frequency of the rrd signal, to approach the transmit service clock frequency Fx as closely as possible **(column 5, lines 48-56 of Chao).**

iii. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to:

(1) combine Chao's phase locked loop circuit into Hagen's system for enhancement of coded communication signals (column 1, line 7 of Hagen).

iv. The ordinary skilled person would have been motivated to:

(1) combine Chao's phase locked loop circuit into Hagen's system since high quality coding of acoustical signals at low bit rates is of pivotal importance to communications systems such as mobile telephony, secure telephone, and voice storage **(column 1, lines 10-12 of Hagen).**

b. *Referring to claim 9:*

i. Hagen and Chao further teach:

(1) wherein the distortion means comprises a buffer **[i.e., referring to Figure 3 of Chao, element 74 and 82)]** for buffering the bitstream of the primary signal and an encoder for generating a distortion signal and modulating the buffered bitstream of the primary signal before inputting it to the output means **[i. e., a bit stream 36 output from the encoder 35 can be combined with bit stream 38 by a conventional combining operation (see Figure 3A) to produce a composite bit stream that passes through the transmission medium 31. The composite bit stream is received at the receiver and separated into its constituent signals by a conventional separating operation (see Figure 3B). The bit stream containing the information for reconstructing the primary coded signal is input to the reconstructor 13, and the bit stream containing the equalization information is input to the decoder 37. (column 7, lines 4-13)].**

c. *Referring to claim 12:*

i. This claim has limitations that is similar to those of claim 11, thus it is rejected with the same rationale applied against claim 11 above.

6. Claims 6-7, 10, and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hagen et al (US 6,182,030), and further in view of Van Wie et al (US 6,240,185 B1).

a. *Referring to claim 6:*

i. Hagen further teaches:

(1) wherein the bitstream of the primary signal of the primary channel consists of a stream of bits for being recorded on a data carrier (e.g., medium wherein electromagnetic waves travel through a medium), in particular on an optical data carrier like a CD or a DVD, in the form of lands and marks **[i.e., referring to Figure 3, the transmission medium 31 corresponds to the channel 12 of Figure 1 (column 6, lines 54-55)].**

ii. Though Hagen does not explicitly disclose the transmission medium including data carrier like a CD or a DVD, Van Wie teaches:

(1) For example, it is generally possible for someone to make an analog recording of program material initially delivered in digital form. Some analog recordings based on digital originals are of quite good quality. For example, a Digital Versatile Disk ("DVD") player may convert a movie from digital to analog format and provide the analog signal to a high quality analog home VCR. The home VCR records the analog signal. A consumer now has a high quality analog copy of the original digital property. A person could re-record the analog signal on a DVD-R (a Digital Versatile Disk appliance and media supporting both read and write operations). This recording will in many circumstances have substantial quality--and would no longer be subject to "pay per view" or other digital rights management controls associated with the digital form of the same content **(column 2, lines 37-51 of Van Wie).**

iii. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to:

(1) clearly point out the format of the medium being recorded since analog formats will be with us for a long time to come, rightsholders such as film studios, video rental and distribution companies, music studios and distributors, and other value chain participants would very much like to have significantly better rights management capabilities for analog film, video, sound recordings and other content. Solving this problem generally requires a way to securely associate rights management information with the content being protected **(column 2, lines 52-60 of Van Wie).**

iv. The ordinary skilled person would have been motivated to:

(1) clearly point out the format of the medium being recorded because persistent association of the commerce and/or rights management controls with content from one end of a distribution system to the other--regardless of the number and types of transformations between signaling formats (for example, analog to digital, and digital to analog) **(column 4, lines 1-6 of Van Wie).**

b. *Referring to claim 7:*

i. Hagen discloses embedded coding, the encoder produces a composite bit stream made up out of two or more separate bit streams: a primary bit stream which contains a basic description of the signal, and one or more auxiliary bit streams which contain information to enhance the basic signal description **(column 2, lines 6-11 and also referring to Figure 1 of Hagen)**. However, Hagen is silent about:

(1) wherein the secondary signal comprises a copy protection key or a digital right.

ii. Whereas, Van Wie teaches:

(1) Electronic steganographic techniques can be used to encode a rights management control signal onto an information signal carried over an insecure communications channel. Steganographic techniques ensure that the digital control information is substantially invisibly and substantially indelibly carried by the information signal. These techniques can provide end-to-end rights management protection of an information signal irrespective of transformations between analog and digital **(see Van Wie's abstract).**

iii. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to:

(1) combine Van Wie's digital right management control information into Hagen's system by providing "end to end" secure rights management protection allowing content providers and rights holders to be sure their content will be adequately protected--irrespective of the types of devices, signaling formats and nature of signal processing within the content distribution chain **(column 3, lines 41-46 of Van Wie)**.

iv. The ordinary skilled person would have been motivated to:

(1) combine Van Wie's digital right management control information into Hagen's system since this "end to end" protection also allows authorized analog appliances to be easily, seamlessly and cost-effectively integrated into a modern digital rights management architecture **(column 3, lines 46-49 of Van Wie).**

c. *Referring to claims 10, 14-15:*

i. These claims have limitations that are similar to those of claims 1 and 6, thus they are rejected with the same rationale applied against claims 1 and 6 above.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanhnga (Tanya) Truong whose telephone number is 571-272-3858.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached at 571-272-3859. The fax and phone numbers for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.

Primary Examiner
Art Unit 2135

TBT
September 16, 2005